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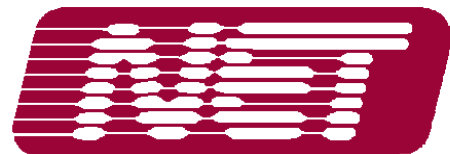
Los Angeles County

**City of South Gate Site Report and LCC Layout –
Draft (Deliverable 2.2.6.1)**

**Gateway Cities Traffic Signal Synchronization
and Bus Speed Improvement
Project - I-105 Corridor (Phase II)**

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Version 1.0



**NATIONAL ENGINEERING
TECHNOLOGY CORPORATION**

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1 INTRODUCTION

The purpose of this document is to provide a design for the Local Control Center for the City of South Gate as part of the I-105 corridor project. This document is based on the recommendations included in the *I-105 Corridor - Draft Conceptual Design Report* and the *South Gate ATMS System Architecture Diagram*. The City of South Gate is one of the cities within the I-105 corridor area that is planned to be a contributor of traffic data to the Information Exchange Network (IEN). The LCC design consists of three aspects:

- The site plan showing the floor plan with the required cable routing and the locations for the equipment racks, the operations console, and the telephone service provider demarcation points.
- The equipment rack elevations for the ATMS equipment.
- Operations console detail showing locations for the operator workstations and video display devices.

2 CITY OF SOUTH GATE ATMS SYSTEM DIAGRAM FOR LCC

The system diagram for the South Gate Local Control Center (LCC) is shown in Figure 2-1. The equipment has been located in both the City Yard and the City Hall. The system components that directly communicate with devices in the field over the interconnect cable were located in City Hall. Communications between the City Hall and the City Yard, where the Primary LCC is located is a high-speed fiber-based network.

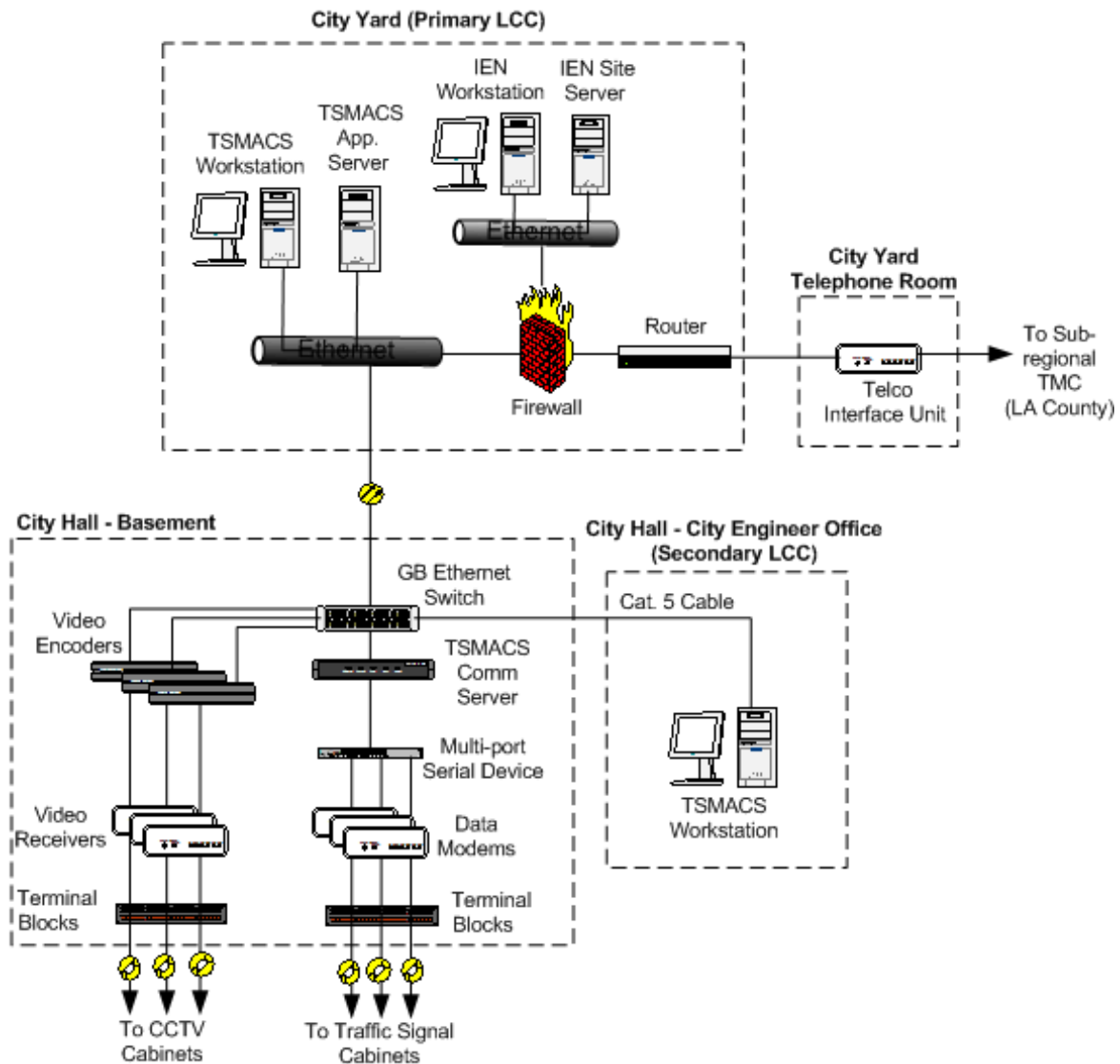


Figure 2-1: South Gate LCC System Diagram

3 LCC FACILITY FLOOR PLAN

3.1 Primary LCC Facility Floor Plan

Figure 3-1 depicts the necessary cable installation to provide connectivity between the proposed server equipment in the City Yard and equipment located at City Hall, as well as the leased network.

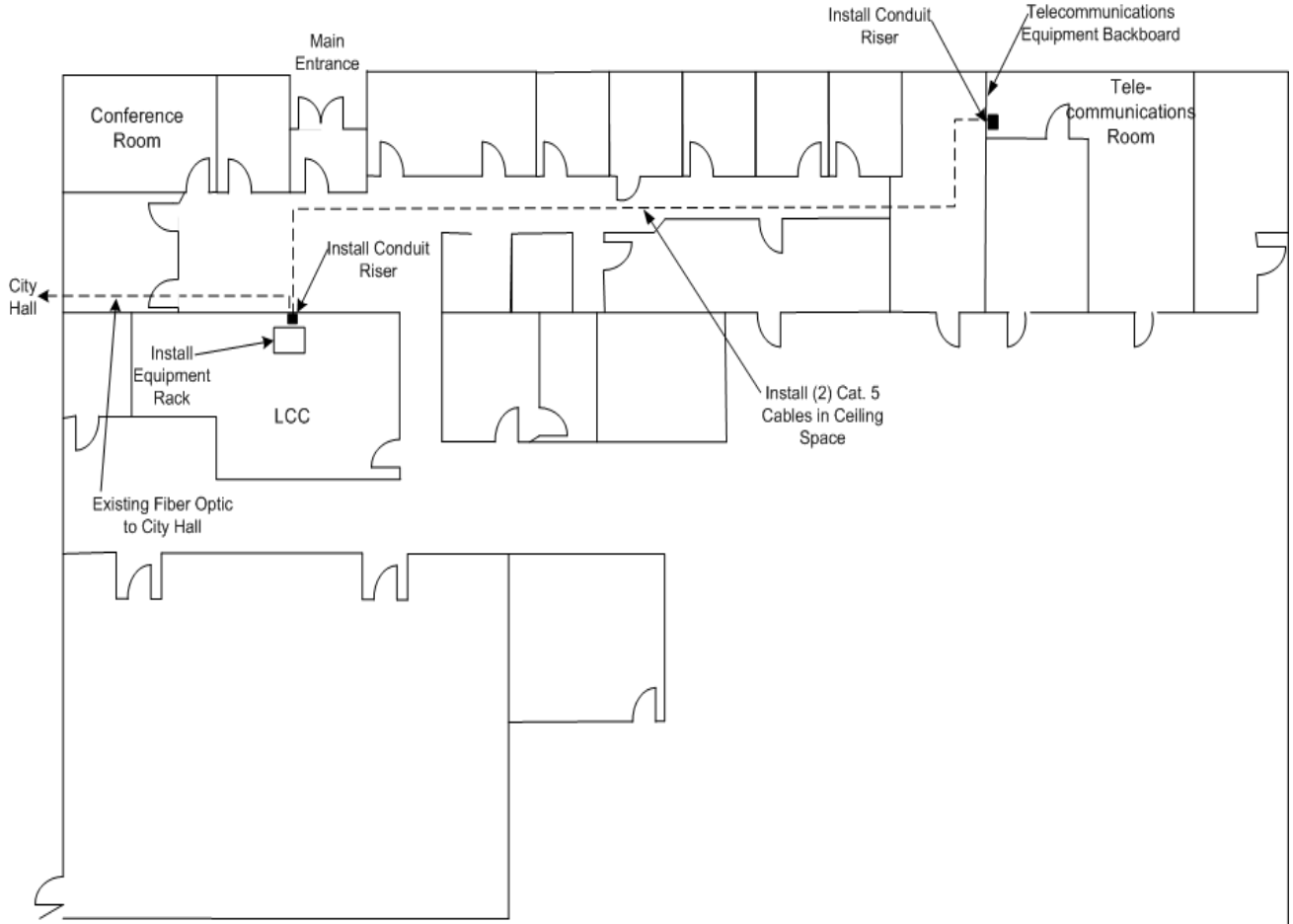


Figure 3-1: City Yard Floor Plan

3.2 Secondary LCC Facility Floor Plan

Figure 3-2 depicts the necessary cable installation to provide connectivity between TSMACS workstations proposed for the City Engineer's office and the Public Works Director's office and TSMACS server computer located in the basement.

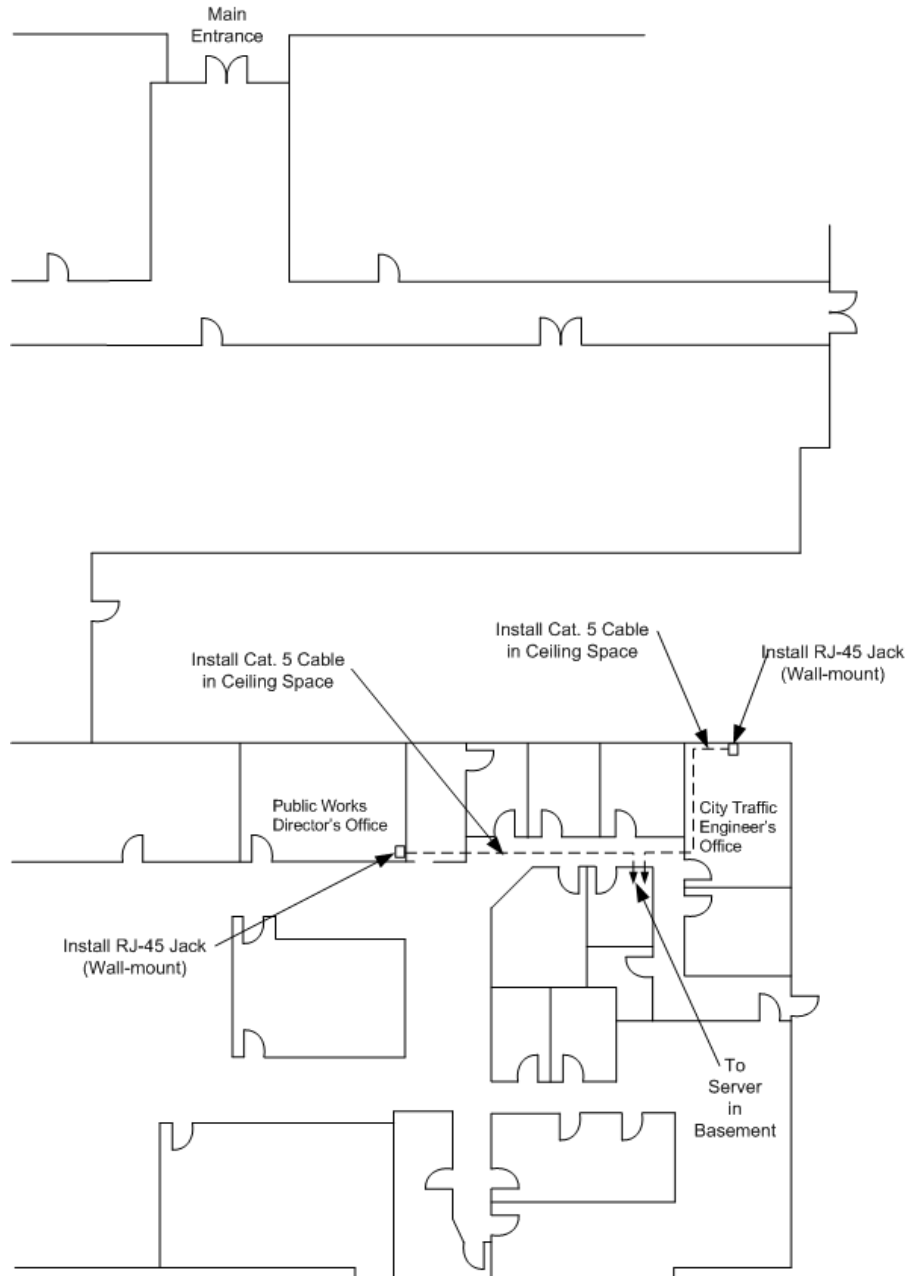


Figure 3-2: City Hall Floor Plan (Secondary LCC)

4 LCC EQUIPMENT CABINETS

4.1 Primary LCC Equipment Cabinet

4.1.1 Rack Elevation

It is proposed to install a new equipment cabinet to be located in the Primary LCC. The equipment rack has dimensions (84" H x 24" W x 30" D) and will be mounted to the floor. Figure 4-1 illustrates the installation of the LCC equipment along with vertical dimensions. Most equipment will be 19" rack-mounted or shelf-mounted. System components, not shown in the system diagram in Section 2, include the KVM (keyboard, video, and mouse) switch to allow a single point of access to all servers in the rack, and an Uninterruptible Power Supply (UPS) to protect the equipment in the case of loss of power supply.

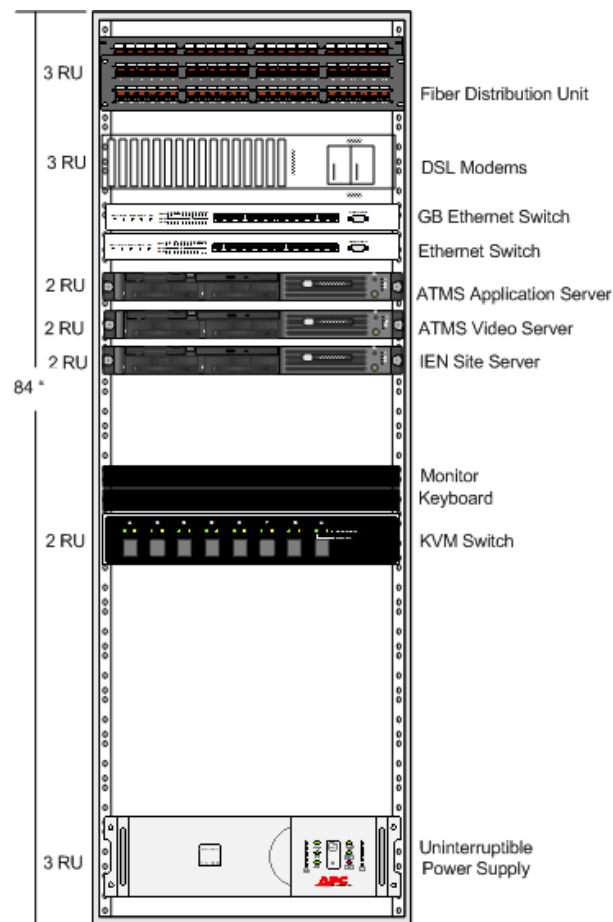


Figure 4-1: South Gate Primary LCC Equipment Rack Elevation

4.1.2 Equipment Power Requirements

The proposed equipment in the Primary LCC is estimated to present an additional load of x.x Amps on the facility. It is recommended that the City provide a dedicated 20 Amp circuit for the power supply to the equipment cabinet housing the equipment as described in Section 4.1.

Table 4-1: Primary LCC Equipment Power Requirements

Item	Qty	Total Power Consumption (VA)	Total Heat Dissipation (BTU/hr)
ATMS Applications Server	1	307	1037
IEN Video Server	1	307	1037
IEN Site Server	1	307	1037
KVM Switch	1	-----	-----
Monitor	1	-----	-----
GB Ethernet Switch	1	50	171
DSL Modems in Card Cage		-----	-----
Decoder	2		
TOTAL		971	3282

4.2 Secondary LCC Equipment Cabinet

4.2.1 Rack Elevation

It is proposed to use an existing equipment rack located in the equipment room of the basement in the South Gate City Hall. This room is the point of entry for the existing interconnects cable coming from Firestone Blvd. The equipment rack has dimensions (72" H x 24" W x 24" D) and is mounted to the floor. Figure 4-1 illustrates the LCC equipment layout along with vertical dimensions. Most equipment will be 19" rack-mounted or shelf-mounted. System components, not shown in the system diagram in Section 2, include the KVM (keyboard, video, mouse) switch to allow a single point of access to all servers in the rack, and an Uninterruptible Power Supply (UPS) to protect the equipment in the case of loss of power supply.

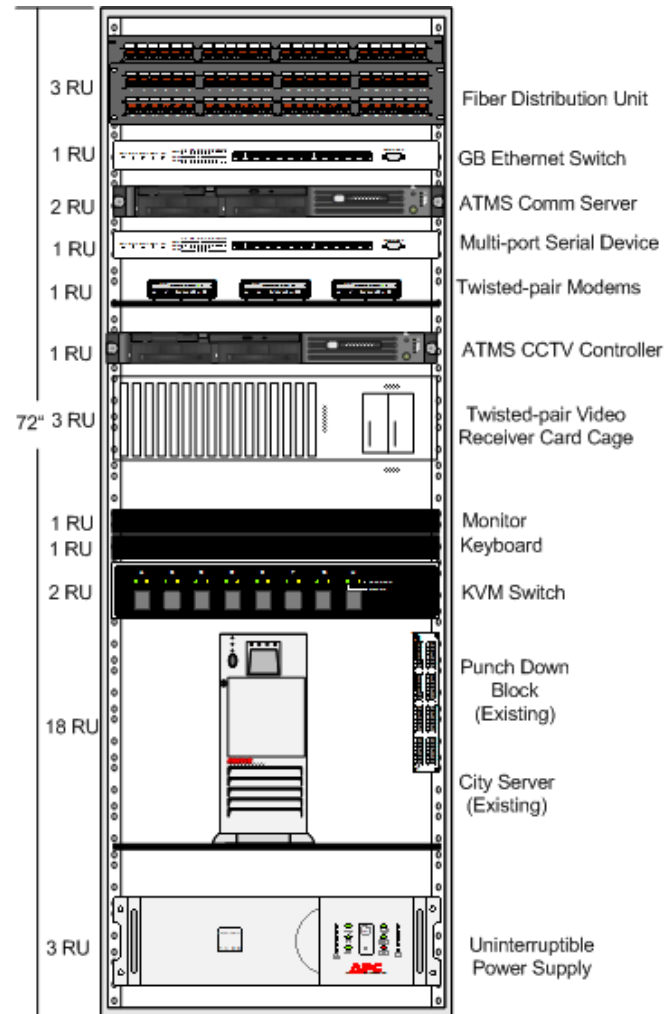


Figure 4-2: South Gate Secondary LCC Equipment Rack Elevation

4.2.2 Equipment Power Requirements

The proposed equipment in the LCC is estimated to present an additional load of 13.7 Amps on the facility. It is recommended that the City provide a dedicated 20 Amp circuit for the power supply to the equipment cabinet housing the equipment as described in Section 4.1.

Table 4-2: Secondary LCC Equipment Power Requirements

Item	Qty	Total Power Consumption (VA)	Total Heat Dissipation (BTU/Hr)
ATMS Applications Server	1	307	1037
IEN Video Server	1	307	1037
IEN Site Server	1	307	1037
KVM Switch	1	-----	-----
Monitor	1	-----	-----
GB Ethernet Switch	1	50	171
DSL Modems in Card Cage		-----	-----
Decoder	2	-----	-----
TOTAL	8	971	3282

5 LCC FLOOR PLAN LAYOUT

5.1 Primary LCC Rack and Console Layout

The Primary LCC is proposed to be located in the room that currently houses the existing traffic signal control system. A new floor-mounted equipment cabinet is proposed to be installed as shown in Figure 5-1. The new ATMS operator console is to be located on the opposite side of the room with a new network cable to be installed in the ceiling space.

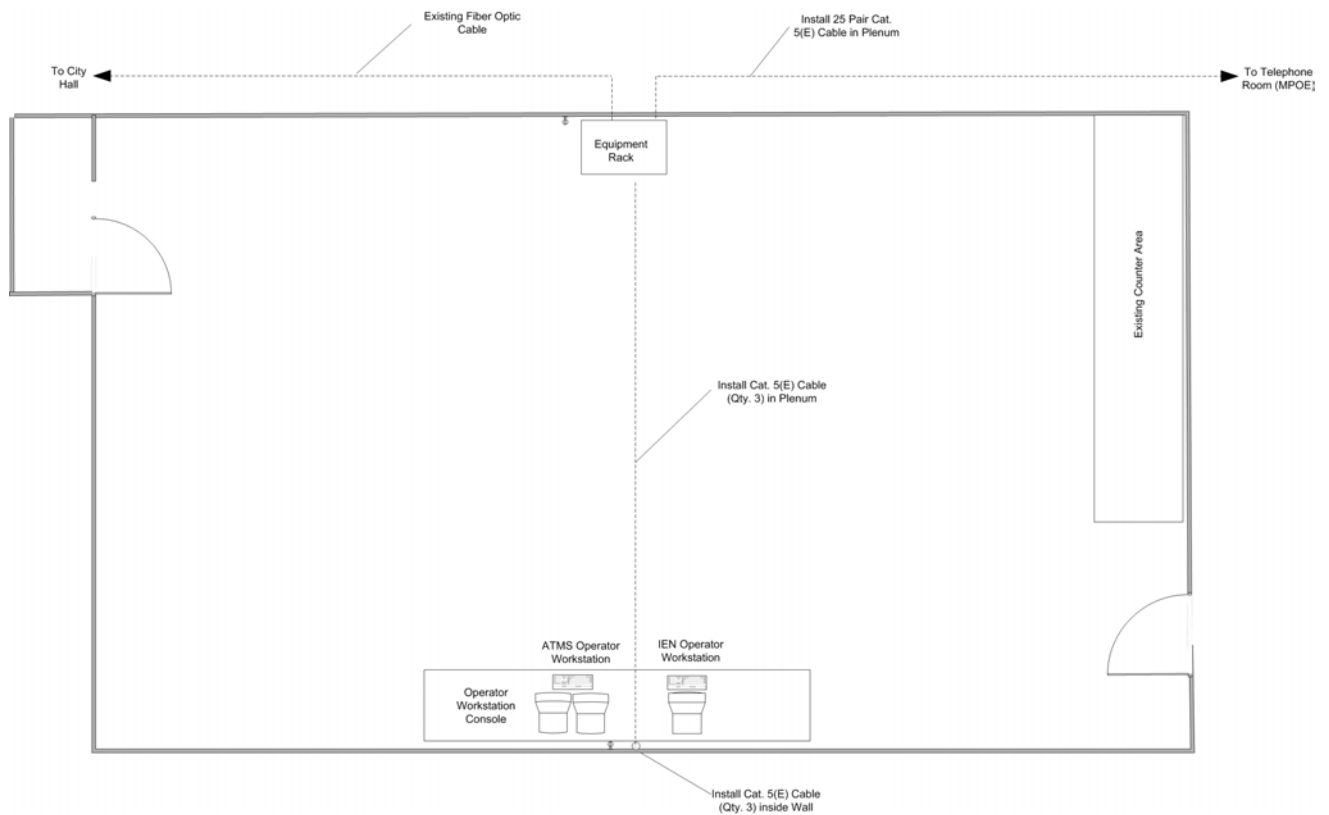


Figure 5-1: Primary LCC Equipment Rack and Console Layout

5.2 Secondary LCC Floor Plan Layout

The Secondary LCC is proposed to be located in the City Engineer's Office, which is located just above the equipment room in the basement. A TSAMCS workstation is proposed to be installed as shown in Figure 5-2, with a network cable running to the basement for connectivity with the ATMS server computers.

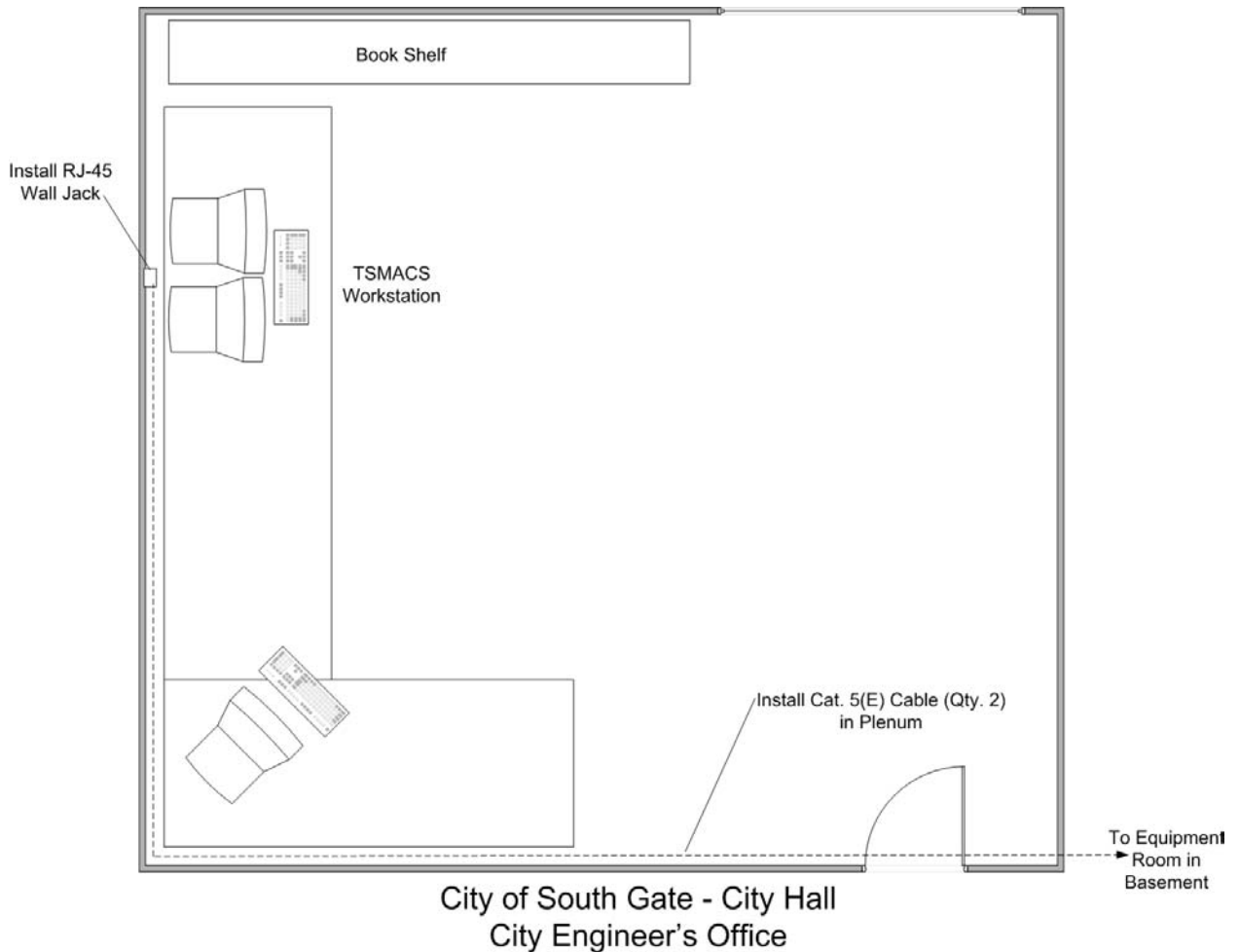


Figure 5-2: Secondary LCC Floor Plan Layout